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ABSTRACT

A study identified and assessed the relative importance of the factors contributing to the placement of students completing postsecondary machine shop programs in Florida. Data were collected from surveys of 1982-1983 program completers and instructors and placement officers at 19 of Florida's 23 postsecondary-level machine shop programs, as well as from in-depth case studies of 9 of the programs. Included among those factors identified as having a positive influence on student placement were adequacy of training, commitment of school personnel to placement of graduates, involvement with a cooperative program, relationship between instructor and employer or graduate and employer, and help from friends or relatives. Graduates' lack of adequate work experience and specific training, shortage of available jobs in the area, and insufficient employability skills training for students were the main factors cited as having a negative impact on student placement. Machine shop programs in the State were urged to develop more cooperative programs, and instructors were encouraged to provide more assistance to students in developing such employability skills as resume writing and preparing for job interviews. (Appendixes to this report include a list of postsecondary machine shop programs in Florida, cover letters to program completers and practitioners participating in the study, and the survey instruments.) (MN)

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Final Report

From December 15, 1984 to August 31, 1985

FACTORS WHICH INFLUENCE THE PLACEMENT OF STUDENTS COMPLETING POSTSECONDARY MACHINE SHOP PROGRAMS IN FLORIDA

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TABLE OF CONTENTS

ABSTRACT ii

ACKNOWLEDGMENTS v

LIST OF TABLES ix

LIST OF APPENDICES x

CHAPTER I. INTRODUCTION

Statement of the Problem 7
Research Questions 7
Significance of the Study 8
Definition of the Terms 10

CHAPTER II. LITERATURE REVIEW

Introduction 11
Vocational Education Placement:
A National Perspective 11
Vocational Placement in Florida 31
A New Approach to Placement 40

CHAPTER III. METHODOLOGY

Introduction 47
Population of the Study 47
Instrumentation 49
Survey Instruments 50
Case Study 53
Data Collection 54
Survey 54
Case study 56
Data Analysis 58

CHAPTER IV. RESULTS OF THE STUDY

Study Group 60
Data Analysis 61
Positive Factors--Graduates 62
Negative Factors--Graduates 69
Positive Factors--Instructors and
Placement Officers 73

Negative Factors--Instructors and Placement Officers 82
Summary 84

CHAPTER V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

Discussion and Conclusions 90
Recommendations for the Profession 93
Recommendations for Further Research 96
Summary 96

REFERENCES 98

APPENDICES 109

VITA 126

LIST OF TABLES

Table		Page
1.	List of Machine Shop Programs Selected for Case Study	50
2.	List and Number of Subjects Involved in the Study	61
3.	Graduates' Perceptions Concerning the Adequacy of Training They Received	63
4.	Type of Placement Services Reported as Being Available to Students	75
5.	Mean Ranking of Sources of Assistance Reported by Instructors and Placement Officers	77
6.	Impact of Advisory Committee/Craft Committee in Placement Process	80
7.	Positive and Negative Factors Which had an Impact on Placement of 1982-83 Machine Shop Graduates	85

LIST OF APPENDICES

Appendix I.	Postsecondary Machine Shop Programs in Florida	109
Appendix II.	Cover Letter to Machine Shop Program Completers	111
Appendix III.	Cover Letter to Instructors and Placement Officers	113
Appendix IV.	Survey Instruments	115

CHAPTER I

Introduction

For the past decade the objective of vocational education has been to provide its graduates with marketable skills and ultimately to place them in jobs for which they have been trained so that they can become productive and self-supporting members of society.

This goal is clearly stated by McKinney, Franchauk, Halasz, Morrison, and Farnash (1982):

> Employment in a job related to training is a widely accepted outcome of postsecondary vocational-technical education programs. Even those persons who view training-related job placement as a supplemental rather than as a primary purpose of vocational-technical education do not deny that job placement is an outcome which represents the expectations of most of those receiving, providing, and supporting post-secondary vocational-technical education programs (p. 19).

In addition to being a goal, if not the main goal, of vocational-technical education, job placement, historically, has played a significant role in the development of

vocational legislation and the evaluation of vocational-technical programs. Therefore, a review of some of the legislation governing the policies and procedures of job placement is in order.

As noted by Hendrickson (1981) the historical emphasis on job placement in vocational-technical education can be traced back to the Smith-Hughes Act of 1917. The major concern of the Congress at the time was that "federally supported vocational education should prepare students for participation in the labor force" (Hendrickson, 1981, p. 4). Thus, as indicated by Duffy (1977), the Smith-Hughes Act specifically addresses the concern of job placement by providing criteria for preparation for the world of work by:

> the subject to be taught; the level that should be taught and to whom--students over fourteen years of age but not in colleges; and for what purpose--prepare them for useful employment (p. 22).

The next major emphasis on job placement occurred during the early sixties. The high rates of youth unemployment and underemployment during the fifties; shortages of trained personnel for technical, semiprofessional, and skilled occupations; and the urgent need for the retraining and continuing education of workers displaced by automation forced Congress to re-examine its vocational

education policies. The re-examination of the policies brought forth the passage of the Vocational Education Act of 1963. The 1963 Vocational Education Act was the first major intervention by the federal government to make vocational education accountable to employment and societal needs.

> The intent of this act was to:
> (a) meet the growing needs of the individual as he attempts to adjust to a changing technology and a variable job market, and (b) to meet the needs of business--the economy of the nation (Mobley and Barlow, 1965, p. 200).

The national impetus that was given to the need for placement and follow-up data in vocational education by the passage of the Vocational Education Act of 1963 was followed by the Educational Amendments of 1976. The Educational Amendments of 1976 included new requirements for the evaluation of federally funded vocational-technical education programs. The new evaluation requirements of the 1976 Education Amendments were intended to promote rational planning and responsiveness of vocational education to the changing labor market. The most substantial of these requirements stipulated that "states evaluate all federally assisted programs on a regular basis and examine job placement rates and employers' opinions of graduates of vocational education programs" (Hendrickson, 1981, p. 4).

The recent renewal of interest in educational quality, the rapid change in technology with its accompanying socio-economic changes, and the great demand for manpower has led to an interest in job placement in vocational-technical education. An excellent example is the Omnibus Education Act of 1984 which was enacted by the State Legislature of Florida.

The Omnibus Education Act of 1984 made various changes in the vocational planning and reporting systems of the State of Florida to ensure a greater level of accountability. Included in these changes are: (a) requirements that the management information system include data on vocational program completers' placement rates, wages, and performance on tests and licensure examinations, and (b) a requirement that the Commissioner of Education submit an annual state accountability report to the Florida Legislature and State Board of Education. The report is to include data describing the extent to which goals in prior plans have been achieved, levels of federal and state appropriations and expenditures, and the results of vocational education program reviews (Omnibus Education Act of 1984).

More specifically, the Omnibus Education Act requires that any secondary vocational job preparatory program with less than a 50 percent placement rate, and any post-se ondary vocational job preparatory program with less than

a 60 percent placement rate, will be subject to a comprehensive program review. In addition, the Omnibus Act mandates that beginning with the 1985-86 school year, any job preparatory program with less than a 70 percent placement rate for a period of three consecutive years will become ineligible for further state funding.

The enactment of the 1984 Omnibus Act has caused concern among the vocational-technical program directors in Florida, whose very existance depends on the funds allocated by the state. Some program directors are even questioning the fairness or accuracy of judging a vocational program's success on the basis of its job placement rate (Office of Governor Planning & Budgeting, 1982a). Educators have also voiced their old concern that if funding decisions result from placements, easy-to-place students will be given priority, thus defeating federal priorities for serving special needs populations (National Institute of Education, 1980).

Legislators, however, argue that:

> The primary goal of any vocational job preparatory program is to train individuals to successfully enter and advance within the labor market. Thus, placement rates of vocational program students are the single best measure of the extent to which a given program or institution is meeting this goal (Attachment II, Senator Curtis

Peterson's letter to the Commissioner of Agriculture, Doyle Conner, September 20, 1984).

The enactment of the Omnibus Education Act of 1984 has resulted in a variety of consequences, including the need for studies of job placement of vocational-technical programs which go beyond the typical practices of collecting data on job placement rates.

In Florida, for example, until recently no specific placement standards were applied (Rennie, 1984). However, the Omnibus Education Act of 1984, requiring that specific placement standards be met by individual vocational-technical programs in order to receive continued funding, has changed the situation completely. As a result of this mandate the analysis of follow-up information and job placement rates will be used not only to establish program accountability and to judge the effectiveness of vocational technical education, but also as the basis for funding vocational-technical programs.

Since job placement rates will be used by the State of Florida to determine funding for vocational-technical education programs, it is logical to assume that vocational technical education directors, administrators, and educators need to use their limited resources to achieve higher rates of placement for their program completers. Understanding the nature of vocational placement and identification of factors which facilitate or inhibit the

placement of vocational graduates will, therefore, be beneficial (McKinney et al., 1982).

Statement of the Problem

The primary purpose of this study is to identify factors which influence the placement of postsecondary students who completed machine shop programs in Florida's vocational-technical schools. In addition, the study will determine the relative importance of each factor in the placement process.

The decision to focus on machine shop programs for this study was made on the basis that machine processes are essential to industrial production. Today, materials are processed by machines and there is a need for individuals who are able to work as machinists or operators of these machines. There is an increase in the number of industries in the state as Florida moves from an emphasis on agriculture and tourism to manufacturing. Because of this change, machine shop programs are becoming one of the areas of increased interest to state economic development planners.

Research Questions. Specifically, this study is designed to seek answers to the following questions:

1. What are the positive factors which influence the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

2. What are the negative factors which inhibit the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

Significance of the Study

Two decades ago Grant Venn (1964) indicated:

> Technological change has, rather suddenly, thrown up a dramatic challenge to this nation's political, economic, social, and educational institutions. Though the full scope of this challenege may not be comprehended for years to come, its dimensions are now clear enough to call for a massive response on the part of American education. All levels of education must quickly move to assume greater responsibilities for preparing men and women for entry into the changed and changing world of technological work (p. 1).

Today the same statement holds true. The challenge presented by revolutionary technical changes has produced a shift in the focus of the federal and state policies regarding public education and, in particular, vocational education. One of the most significant ramifications of this shift in federal and state policies concerning vocational education has been the establishment of tougher measures and standards for the placement of vocational-technical program completers.

Following the lead of the federal government, Florida established specific regulations concerning placement. According to these regulations, vocational-technical programs will be evaluated and, consequently, funded on the basis of placement rates of program completers.

If Florida vocational educators are to achieve the placement rates established for vocational-technical program completers they must examine the factors which negatively or positively influence the placement of their former students in training-related jobs. As McKinney et al. (1982) noted:

> Without information on the factors influencing the job placement process, vocational-technical educators face difficulties in making recommendations to enhance the placement of students in jobs related to their training. If policy makers are to optimize the use of resources, it is essential that they have information concerning those factors affecting the placement of former students in jobs that they have been trained for (p. 25).

Identification of factors which influence the placement of vocational-technical program completers could be used not only in preparation of guidelines for improving job placement processes, but also to improve the quality of

job placement services offered by vocational-technical programs.

Definition of Terms

The following definitions are provided to clarify their use in this report.

Vocational Program: A planned sequence of instruction, courses, services, and/or activities designed to meet an occupational objective (Division of Vocational, Adult, And Community Education, 1985).

Program Completer: A student who has finished a planned sequence of courses or competencies designed to meet the criteria for the program in the State Board of Education Vocational Education Program Standards and who has graduated from the program.

Job Placement (Secondary and Postsecondary Vocational Students): A process by which a person who has completed an occupational preparatory program is placed in an occupation requiring the use of competencies attained in the program.

CHAPTER II

Literature Review

Introduction

The review of literature on factors which influence the placement of students completing vocational-technical programs is divided into three sections. The first section, Vocational Placement: A National Perspective, presents a history of placement and a review of research literature concerning placement from across the country. The second section, Vocational Placement in Florida, reviews the history and some of the recent research literature on vocational education placement in the state of Florida. The third section, A New Approach to Placement, describes an innovative approach to the study of vocational education placement. This section also includes an examination of the advantages of using a case study approach to placement studies.

Vocational Education Placement: A National Perspective

Until the latter part of the nineteenth century the responsibility of assisting youths to enter the world of work was borne by the family. The child grew in the family and was socialized through interaction with parents and adult relatives. At the same time, parents and relatives provided the training and the full support for the

transition and placement of the child from the home environment to the work environment (Kosmo, 1978).

By the turn of the century the family had lost its dominant role in placing youth in jobs, mainly as a result of the industrial revolution and its need for highly specialized workers (Kosmo, 1978). Since parents lacked the skills required for many of these occupations, it was no longer possible for children to model their training after the behavior of their parents. The result was increased reliance on school and government for job training. This was the beginning of the government's role in vocational education and, subsequently, in job placement. In short, a degree of familial responsibility was transferred to governmental authorities.

Kosmo (1978) proposed that understanding the history of government-sponsored placement services in this country depends on the examination of several aspects of American life. From her point of view, the history of placement services in America is a reflection of two different aspects of American society: a) the free enterprise system as the dominant social policy; and, b) the desire of Americans for full employment and equal opportunity. As a result, government-sponsored placement services in this country have been developed on the following bases:

1. Industry's desire to be able to select the best workers through maximum supply of labor, and

2. The demand of citizens for equal opportunity and gainful employment.

Reinforcement of welfare regulations, the establishment of affirmative action programs, and vocational and rehabilitation programs for handicapped exemplify the federal government's effort to fulfill both the needs of industry and the needs of the citizens of this country.

The Smith-Hughes Act of 1917 and the Vocational Education Act of 1963 represent significant governmental efforts to provide youth with appropriate training and placement. Hansen (1964) points out that:

> The Smith-Hughes Act of 1917 was the first and perhaps most important of a series of legislative provisions for direct federal aid, through state boards of education, to local school districts to help pay as much as 50% of the instructional costs of high school programs in vocational agriculture, trades and industries, and vocational home economics (p. 37).

The 1963 Vocational Education Act expanded funding for vocational education and authorized the states to use the federal grants to maintain, extend, and improve existing vocational programs and to provide part-time employment for students who needed earnings to be able to continue their vocational training. It also expanded the interpretation of vocational education "to include placement services for

graduates although such language was not codified" (Ohio Legislative Service Commission, 1978, p. 5).

The government's effort for placement of youth in the world of work through allocation of funds to states, and subsequently to educational programs, emphasized the concept of placement to educators. Until that time, educators had been mainly interested in what happened to the students while they were in the classrooms. What happened to the students after they finished school was regarded as, more or less, the students' own responsibility. However, during the past two decades educators, especially vocational educators, have become more aware of the obligations of vocational schools in the placement of students in the world of work.

It has come to be accepted by American society that no one should leave school without a basic education and the skills which would enable him or her to use these abilities in the world of work. As an outgrowth of this belief, the general public has asked government officials and educators to demonstrate that program completers have these abilities. As Kruger (1970) points out:

> The crunch of inflation, rising teacher salaries, growing tax burdens, and public alarm at the rapid worsening of social problems for which the schools have significant responsibilities--all have brought the idea of educational account-

> ability sharply into focus in the minds of many Americans (p. 1).

In 1970, the amendments to Title I of the Elementary and Secondary Education Act required data collection from all school districts on expenditures and staffing for the purpose of accountability at various levels of school supervision (Fairley, 1972). This was the first step in the development of an accountability process. However, as John Hunt (1975) indicated:

> One common thread running through various definitions of accountability is that they usually encompass some form of quantitative measurement. While legislators and taxpayers often perceive such measurement as related to money, educators have modified the definition of accountability to focus on the educational process and on the student (p. 8).

An example of such modification is the definition of accountability proposed by Kruger (1970):

> The concept of educational accountability is a broad one, but it is primarily concerned with those principles and techniques which may be utilized to assure a high level of attainment of the objectives of the educational enterprise with an accompanying wise and efficient use of society's resources (p. 1).

Lausberg (1971) related accountability to both responsibility and expectation.

> In its most basic terms accountability means holding the educational system responsible for results. Parents, legislators, and students themselves expect reliable evaluation measures of what has been accomplished . . . . They want to know, in short, what they are getting for their time and money (p. 1).

Considering the fact that, historically, the goal of vocational education has been to provide students with knowledge and skills necessary for entry into the world of work, it is understandable that placement of students in jobs related to the field of training has been used as an accountability measure. As suggested by Richardson and McFadden (1977):

> Since accountability measures the achievement of basic purposes, it is necessary to make judgements concerning effectiveness of vocational education by measuring its observable results. The success of graduates, the wages they earn, the number engaged in occupations for which they are trained . . . are the types of data that influence this judgement (p. 1).

The emphasis on vocational education accountability during the 1970s contributed to the passage of the

Educational Amendments of 1976. The 1976 Educational Amendments are viewed as a major intervention by the federal government to make vocational education accountable for employment. The new requirements introduced by the 1976 Educational Amendments hold states accountable for training-related placement and employer satisfaction. As a result, the states are required to regularly evaluate all federally funded vocational education programs and to examine job placement rates and employer satisfaction.

Studies on placement and follow-up of vocational education programs can be categorized into the following three groups:

a. Follow-up and placement studies which mainly concentrate on comparison between placement rates, wages, and employers satisfaction for vocational graduates and non-vocational graduates;

b. Follow-up and placement studies which deal with the quality and quantity of placement services offered by vocational programs;

c. Placement studies which deal with the factors that influence the placement of vocational education students.

Considering the fact that states are now required to examine the placement rates of vocational education programs, a great number of studies on placement are conducted each fiscal year by state and local agencies. These studies, and most follow-up and placement studies

done before the passage of 1976 Educational Amendment Act, tend to concentrate on the placement rates of vocational education program completers and employers' satisfaction. The following examples of these studies demonstrate the scope and methodologies reported in the literature and identify variables the researchers hold to be significant.

However, since the enactment of 1976 Educational Amendment Act which mandated the examination of job-placement rates of vocational education programs, scores of studies have been devoted to placement and follow-up studies of vocational education programs (Noeth & Hanson, 1975; Gary, 1979; Preston, 1974; Francies & Jones, 1976; Lach & Kohl, 1981; Arrington & Price, 1983; Kim, 1980; Allred & Wingfield, 1982; Kirby, 1980; Lucas, 1982; Nespolie, 1979).

One of the oldest and most important placement and follow-up studies was the study conducted in 1966 by the U.S. Office of Education. The study provided placement information about 606,872 graduates of vocational education programs. The findings were reported in terms of the percentage of employed graduates for each field of training, percentage of graduates employed in fields related to training, percentage of graduates unemployed, and percentage of graduates who joined the Armed Forces.

The findings of the study indicated that 80 percent of all graduates were employed in jobs related to their

training. The percentage of employed students for each vocational field was as follows: agriculture, 67 percent; home economics, 76 percent; distributive, 78 percent; trade and industry, 80 percent; office, 81 percent; technical, 90 percent; and health, 92 percent. The results also revealed that only 4 percent of graduates were unemployed, while 23 percent continued their education and 8 percent joined the military (Committee on Labor and Public Welfare, U.S. Senate, 1968).

Creech (1977) conducted a study entitled "Comparative Analysis of Postsecondary Occupational and Education Outcomes of the Class of 1972." The population of study consisted of 17,726 secondary vocational and nonvocational graduates. Findings of the study were reported in terms of employment status of graduates, job satisfaction, continuation of studies, and wages for each group. The results of the study indicated that vocational high school graduates were employed at a higher rate than nonvocational graduates, but had a lower rate of pursuing educational degrees.

Similarly, the Noeth and Hanson (1976) follow-up study examined the outcomes of vocational training on the bases of employment status of graduates, employment in fields related to training, and job satisfaction. The result of the study revealed that a vast majority of students who

completed their vocational programs were employed in occupations related to their training. Even a large number of the students who did not finish their programs obtained jobs in training-related fields. The researchers reported that among those students whose first employment was not related to training there was a trend to gravitate toward training-related jobs. In addition, both program completers and noncompleters expressed their satisfaction with their programs and felt that they would have not been able to obtain their present jobs without their vocational training.

Elson and Gerken (1979) conducted a follow-up study of 1977-78 secondary vocational graduates and dropouts in the state of Virginia. The study examined employment status, employment related to training, wages, continuation of education, and satisfaction with training. The researchers found, from 15,879 secondary vocational graduates, that of those who left before completing the program over 60% were employed. In addition, 70% of the employed respondents held jobs in fields related to their training.

Numerous other follow-up studies also focused on the employment status of graduates of vocational programs, employment in fields related to training, salary, job satisfaction, and employer satisfaction (Felstehausen, 1973; Durkee, 1975; Hamby, 1978; Swanson, 1976; Baratta,

1978; Van Bramer, 1979). It should be noted that most of these follow-up studies were conducted through a mail survey, a telephone interview, or a combination of both.

However, several researchers conducted their follow-up studies using other approaches. A study by Market Opinion Research (1973) collected data on 254 vocational graduates, 257 nonvocational graduates, and 247 employers in the state of Ohio through personal interviews. The findings indicated that the vocational graduates received higher ratings than nonvocational graduates in regard to skills required for entry level employment, technical knowledge, attitude toward learning new skills, and concern for safety and productivity. It was also found that vocational graduates earned higher salaries than nonvocational graduates at the early stages of their employment, but this advantage was diminished over a period of time.

Durkee (1975) studied the employment status, employment related to training, and continuing education of 1,181 former secondary vocational students in the state of Wyoming by interviewing school personnel. The major finding of the study was that 68% of the vocational graduates were employed. Also, it was found that 70% of the employed graduates were employed in jobs related to their training.

Follow-up studies which only deal with the employment rates, employment related to training, and employer satisfaction provide valuable information concerning the impact

of vocational education on the employment status of graduates. Also, the results of such studies have been used to evaluate the strengths and weaknesses of vocational education programs. Basically, the purposes of these types of placement studies have been either to comply with the federal regulations so that funds will not be discontinued, or to provide empirical data to reflect the success of vocational education. However, these studies provide no insights into the quality and quantity of placement services , the impact of placement services on the employment of students, or the factors which contribute to higher or lower placement rates of vocational program graduates.

Prior to 1970, research on placement services was virtually nonexistant. A 1970 search by Little for review and synthesis of research on placement services revealed that no information was available on job placement services for vocational education. Little (1970) reported that his search for studies dealing specifically with job placement was completely fruitless.

Even to date few studies have dealt with the quality and quantity of placement services offered by the vocational programs. It should be noted that none of these studies was specifically designed to deal with placement services. Those few studies that did discuss the issue of placement services did so as part of the total follow-up study.

The influence of follow-up studies on the quality of placement services provided to students of vocational programs is rather disappointing. A majority of the studies reached the conclusion that students were generally dissatisfied with the quality of placement services provided by their programs. Hoyt, Evans, Mackin, & Mangum (1972), and Wirtz (1975) indicated that the employment-related aspects of career guidance responsibilities have not been fulfilled, with job placement the most neglected of these. The following five studies provide additional evidence in support of these results.

Francies and Jones (1976) found that a high percentage of graduates expressed dissatisfaction with the job counseling and placement services offered by two-year colleges in the state of New York. The authors pointed out that ". . . only 28.6% of graduates registered with the placement office at their college. Many indicated that they were unaware that the college had such an office" (P. 42).

Kirby (1980) reported that 81.5% of Oakton Community College graduates, and a large percentage of Illinois Community College graduates were dissatisfied with the assistance they received from the placement office. Graduates from both community colleges were also critical of the job counseling services they received.

The follow-up study of the nongraduate completers of Illinois Community College also revealed that while

students ranked job placement and career services unfavorably, the library, veteran's instructional services, and financial aid services received high ratings (Lach & Kohl, 1981).

Also, a comprehensive study on 61 vocational programs in Florida conducted through the Governor's Office (1982) revealed that vocational placement offices had no significant impact on placement of graduates. In addition, a majority of the students expressed their dissatisfaction with the services provided by the these offices.

In 1980, a study of the effectiveness of job placement services provided to secondary vocational students in South Carolina high schools and vocational centers was conducted by the National Evaluation System, Inc. The analysis of the data collected from 1000 teachers, 277 administrators, and 1000 students revealed that vocational education programs offered limited or no job placement services to adult vocational students.

Recently, the focus of the studies on vocational education placement has shifted toward new issues. Instead of measuring the placement rates of vocational graduates, researchers have begun to focus on factors which influence the placement of vocational graduates. Unfortunately, the number of studies that have dealt with influence issues is very low. Only three significant research studies devoted

to influences affecting vocational placement have been identified.

One major national study on factors influencing the placement of vocational graduates is the study done by McKinney and Halasz-Salster (1981). The researchers used both qualitative and quantitative data derived from a sample of local vocational directors, high school principals, vocational teachers, counselors, job placement specialists, local vocational education advisory committee members, current students, former students, parents of current students, parents of former students, and employers.

The results of this study indicated that the following factors had a significant influence on placement of vocational graduates:

a. Philosophy: "The philosophical positions of relevant individuals and agencies regarding vocational education and subsequent job placement were found to be most important in determining an environment conducive to high job placement" (McKinney & Halasz-Salster, 1981, p. 8). The data analysis indicated that at sites with high placement rates school personnel had positive philosophies about vocational education and believed that vocational placement is a desired outcome of vocational education.

b. Legislation, regulation, and funding mechanisms: federal and state legislation, regulation, and funding

mechanisms had an impact on the characteristics of placement practices, placement rates, and attitudes of relevant individuals and agencies concerning placement. Consistency between federal and state legislation, regulation, and funding mechanisims was found to have a positive impact on the placement practices and placement rates. Also, school personnel and relevant agencies working under such a consistent environment had positive attitudes about vocational placement.

c. Curriculum: The content of the curriculum and its closeness to the needs of local employers proved to be related to job placement rates. The data analysis revealed that:

> in order to enhance job placement in local businesses and industries, former secondary vocational students must: have a positive work attitude, have a solid foundation of basic computation and communication skills, have a good interpersonal skills, and have developed basic understanding of and skills for working in the occupation with appropriate tools and equipment (McKinney & Halasz-Salster, 1981, p. 10).

d. Teachers: The degree of the commitment of teachers to the preparation of students for meaningful employment played a significant role in placement of vocational graduates. The results of the study revealed that teachers

who were highly committed to placement of students not only were using updated and relevant materials developed on the basis of the employers' needs, but were in constant communication with employers and members of advisory council.

e. Admission: The criteria for admission had an impact on placement rates of vocational graduates. Vocational programs which tightly controlled admission of students had higher job placement rates.

f. Other Factors: Factors such as student involvement in cooperative education and student clubs, attitude of community, parents, and schools toward vocational students, and promotion of vocational programs in the community all emerged as factors effecting placement of vocational graduates.

Finally, the authors suggested that maximization of placement rates is related to several variables. Based on the findings of this study, high job placement existed in schools where: school personnel had a clear understanding of the purposes of vocational training, personnel had a knowledge of the needs of business and industry, personnel were enthusiastic and were committed to placing students, teachers possessed the latest skills, and the program curriculum was frequently revised on the basis of changing labor market information (McKinney & Halasz-Salster, 1981).

In 1981, Lewis, Fraser, Russell, and Orth performed a secondary analysis of data gathered by McKinney and Halasz-Salster (1981). This study focused only on examining the quantitative data related to the factors identified by McKinney and others as factors that educational policy makers and school personnel have some control over. The authors reported that based on the quantitative data, the only statistically significant factors were the ones involving commitment of school personnel to training-related placement, teachers involvement in placement of their students, and student participation in vocational youth organizations.

In addition to these studies, earlier studies conducted by Buckingham (1973), Eninger (1968), Goor and Schroeder (1976), Kaufman and Schaefer (1976), Lloyd (1981), Moehan and Franchak (1975), Rosen (1970), Venn (1964), and Wasil (1976) all provide empirical evidence that school personnel involvement and contact with employers contributes to the placement of students.

A report by the Ohio Legislative Service Commission on Secondary Vocational Education (1978), on job placement and staff funding, indicated that six major factors influenced the placement of vocational graduates. The factors were: a) degree of placement effort in the district, b) general economic conditions in the district; c) community

relations, d) relations with business, e) vocational student body variables, and f) graduates' job competition.

The data collection procedures in the Ohio Legislative Service Commission study consisted of two days of on-site visitation and interviewing the employers and graduates. During the two-day on-site visits, the researchers observed the classes and facilities, and interviewed teachers and administrators. The next procedure was interviewing the employers of graduates. The graduates (10% of the 1976 graduates) were interviewed by telephone.

Finally, a three-year study was conducted by Instructional Development and Evaluation Associates on significant factors that affect the job placement rates of students completing a Home Economics Related Occupations (HERO) program in the state of Michigan.

The data were collected through on-site interviews and telephone interviews. The population of the study consisted of advisory committee members, placement directors, vocational directors, program instructors, students, recent graduates, program completers, program leavers, and employers of program graduates.

The results of the Michigan study indicated that three factors influenced the placement rates of graduates from a HERO program. These factors were: "The use of program assessment procedures annually; the use of student

follow-up data; and public relations/promotional activities" (Instructional Development & Evaluation Associates, 1983, p. 27).

While placement and follow-up studies concentrated on data collection through survey instruments and occasionally telephone interviews, research on factors related to placement of vocational graduates have consisted of both qualitative and quantitative methods. It should be noted that the number of research studies dealing with factors which influence the placement of vocational education is considerably limited. This limitation is mainly due to the fact that researchers only recently have begun to shift their attention from dealing with placement rates and quality of placement services to factors which contribute to lower or higher rates of placement. In short, research in this area is still in the very infantile stage of development.

However, the available research on factors which have an impact on placement of vocational education graduates suggests that the placement of vocational education program graduates is the product of a very complex system which involves the educational, social, and economical structure of a community. Our knowledge concerning the specific factors which influence the placement of vocational education graduates is limited and better understanding of the process necessitates research studies which use both qualitative and quantitative methods. Through a combination of

these two methodological approaches researchers should be able to study the complex structure of job placement.

Vocational Placement in Florida

The State of Florida has, for some time, had a reputation as a front runner in the field of Vocational Education. Florida was one of the first southern states to comply with the provisions of the Smith-Hughes Act of 1917. This marked the beginning of a long-term effort by the state to provide Floridians with the type of education that will enable them to seek gainful employment (Stakenas, Mock & Eaddy, 1981).

However it was not until 1973 that the first legislation in Florida dealing with vocational placement was enacted. Florida Senate Bill No. 1025 required the establishment of vocational placement and follow-up services, specifically, requiring that:

> Section 2. On or before September 1, 1974, each district school board shall establish and maintain job placement and follow-up services for all students graduating or leaving the public school system, including area vocational-technical centers.
>
> Section 3. The State Board of Education shall develop and prescribe alternative methods by which school boards are to provide placement and follow-up services. Where possible, this respon-

> sibility shall be given to guidance counselors and occuptional and placement specialists.
>
> Section 4. It shall be the further responsibility of the job placement personnel to make written recommendations to the district school board concerning areas of curriculum deficiency having an adverse effect on the employability of job candidates (Florida School Laws, 1975, p. 41).

In effect, vocational personnel became responsible not only for developing systematic placement and follow-up studies, they were also required to use the placement and follow-up information to provide feedback for improvement of their program curricula. The purpose of such a requirement was to ensure regular feedback and thereby improve the quality of vocational programs.

Following the passage of Senate Bill 1025, the Florida State Department of Education developed the Florida Guidelines for Placement Services and Follow-up Studies. This document constituted the statewide position paper for moving placement and follow-up from theory into practice.

Since 1973 several statutes and rules have addressed the issue of follow-up and placement in Florida. One such statute is the Student Services Act (Florida Statutes 230.2313). The intent of this act was to determine the specific functions of each component of the student services program. The Student Services Act mandated:

(a) Guidance service, which shall include, but not be limited to. . . the following up of early school dropouts and graduates. . . and educational and job placement. . .
(b) Occupational and placement services which shall include, but not be limited to. . . placement services, and follow-up studies. Such follow-up studies may be conducted on a statistically valid random-sampling basis where appropriate and shall be stratified to reflect the appropriate vocational programs of students graduating from or leaving the public school system. . . It shall be the responsibility of district placement personnel to make written recommendations to the superintendent for consideration by the district school board concerning areas of curriculum deficiency having an adverse effect on the employability of job candidates or progress in subsequent educational experience. Further, district administrative personnel shall report to the school board concerning adjustments in program outcomes, curricula, and delivery of instruction as they are made with the use of placement and follow-up information (Florida School Laws, 1982, p. 43).

The typical procedure for conducting follow-up and placement studies in Florida has consisted of an annual mail-out survey of vocational graduates by each school district. The survey instrument was usually sent to graduates four months after the June graduation. Response to the questionnaire has depended upon the voluntary participation of the program completers. The data were compiled, analyzed, and forwarded by the local district to the Florida State Department of Education (Interview with State Placement coordinator, February 1985).

In 1981, vocational education in Florida came under scrutiny because of complaints of business and industry representatives concerning the shortage of manpower in certain high technology occupations. An indication of business and industry's concern is reported in a study by Lovelace (1982). In his study Lovelace found that 57% of the employers in Florida believe that lack of adequate training, and lack of coordination between training and placement agencies, are responsible for the shortage of manpower in Florida.

In response to these concerns, the Legislature requested, in 1981, that the Governor's Office conduct a comprehensive study designed to assess the effectiveness of vocational programs in terms of employment and, in particular, placement in a job related to the field of training. The result of this study concerning vocational placement

indicated that from the 61 vocational institutions reviewed only 48% had a placement office. In addition, the result of data analysis indicated that the placement offices had no significant impact on the placement of vocational graduates. Vocational instructors, friends, and relatives were found to be the most prevalent means of placing vocational graduates. The research also reported that the respondents believed that insufficient staffing and inadequate state funding were the main reasons for the ineffectiveness of placement offices in influencing student placement (Office of Governor Planning & Budgeting, 1982b).

The findings reported by this study, coupled with the recommendations of the Postsecondary Education Planning Commission and the result of a recent study by the Florida State Advisory Council on Vocational and Technical Education, set the stage for a new development in the history of vocational education in Florida. The Postsecondary Education Planning Commission, after a review of the postsecondary vocational programs in Florida Recommended that:

a) postsecondary vocational education programs should be required to provide a placement rate of at least 75 percent and programs which fail to provide such a placement rate should be subjected to a comprehensive review; b) the quality of follow-up and placement data should be improved; and c) a closer tie between business, industry, and

postsecondary vocational programs should be established (Postsecondary Education Planning Commission, 1984).

Contrary to the recommendations of the Postsecondary Education Planning Commission, the Florida State Advisory Council on Vocational Technical Education (FSAC), on the basis of their study on the effectiveness of policies and procedures used for vocational job preparatory student placement, warned against using student placement rates as the basis for evaluation of vocational programs.

The FSAC study also revealed that vocational student follow-up and placement data were primarily used for compliance with state and federal requirements rather than for program improvement. In addition, it was found that there were serious questions concerning the validity of the existing follow-up and placement data because of low response rates, confusion over terminology, and delays in obtaining the data from the districts.

The most important finding of the FSAC study was that the local vocational personnel were seriously in need of assistance. The results of the study indicated that local personnel were not clearly informed about effective ways of conducting follow-up and placement studies; nor were they informed about the effective use of placement personnel, funding, facilities, and time (Florida State Advisory Council on Vocational and Technical Education, 1984).

As previously mentioned, the result and recommendations made by these studies contributed to the Legislature's decision to establish tougher measures for the evaluation of vocational programs. Thus, the Florida legislature passed the Omnibus Education Act of 1984. The intent of the legislation was to establish a set of standards for the evaluation of vocational programs to determine the extent to which vocational education programs are achieving the goals and objectives of the state. The decision was made by the legislature to use placement rates as the basis for evaluation of vocational education programs.

The Omnibus Education Act of 1984 re-emphasized the State's commitment to the annual collection of placement and follow-up data for persons completing job preparatory vocational programs. Furthermore, the Omnibus Education Act of 1984 required that the vocational follow-up and placement data should include: employment and unemployment rates of vocational graduates, extent of training-related employment, comparison of employment and unemployment rates between vocational and nonvocational graduates, surveys of employer satisfaction, and vocational students' performance on standardized basic skill tests.

According to the mandate of the Omnibus Education Act, the result of the follow-up and placement studies of vocational programs will be used as bases for funding

the programs. Specifically, the Omnibus Education Act stipulates that:

> Any secondary job preparatory vocational program in which the average placement rate of persons completing the program is less than 50 percent for any given year, and any postsecondary job preparatory vocational program in which the average placement rate is less than 60 percent for any given year, shall be automatically reviewed by the Department of Education. The program review shall be submitted to the appropriate regional coordinating councils and shall be accompanied by a plan for improving the program's placement rate. Any job preparatory vocational program in which the average placement rate of persons completing the program is less than 70 percent for 3 consecutive years, beginning with the 1985-86 school year, shall be ineigible for future state funding. The state board shall adopt rules to implement this part. For the purpose of this section, a student in a secondary job preparatory vocational program shall be considered to be a "placement" if he has become employed in an occupation requiring the use of the competencies acquired in his vocational program, has entered the military, or has

> continued on to postsecondary education. A student in a postsecondary job prepratory vocational program shall be considered a "placement" if he has become employed in an occupation requiring the use of competencies acquired in his vocational program, has entered the military, or has continued on to related postsecondary education (Omnibus Education Act of 1984, p. 77-78).

The enactment of this legislation has caused substantial concern among Florida's vocational educators. The fear of discontinuation of funds coupled with the lack of clarity on effective ways of conducting follow-up and placement studies has led to scores of requests by local vocational personnel to the Florida Department of Education to provide assistance. During the period between September of 1984 and February of 1985 the Division of Vocational Adult and Community Education conducted several workshops on follow-up and placement studies. However, during the course of these workshops and discussions with local vocational personnel it was recognized that even if short-term remedies such as workshops proved to be beneficial, there is a need for long-term planning in order to maximize the placement rates of vocational programs (Interview with State Placement Coordinator, February 1985).

Identification of factors which have either negative or positive impacts on placement rates of vocational

graduates has been recognized as the first step in the development of a planning system for the improvement of vocational placement.

A New Approach to Placement

During the past few years the research approach to vocational placement has been shifting toward holistic, descriptive research methods such as the case study. A brief look at the definition and nature of case study and the reasons for this shift of emphasis among researchers will provide valuable insight into the methodology developed for this study.

A review of literature reveals that case studies have been defined in many ways. Franklin and Osborne (1971) defined case study as "a method of organizing data for the purpose of analyzing the life of a social unit" (p. 148). While, Wilson (1979) described case study as a "a process of research which tries to describe and analyze some entity in qualitative, complex, and comprehensive terms not infrequently as it infolds over a period of time" (p. 448). Spirer (1980) asserted that a case study "is an intensive detailed analysis and description of a single organism, institution, or phenomenon in the context of its environment" (p. 14).

Spirer (1980) described three different techniques that are used for a case study. These techniques are observing, interviewing, and unobstrusive data collection.

Observing--observing is referred to as research that is "characterized by a period of intense social interaction between the researcher and the subjects, in the milieu of the latter. During this period, data are unobstrusively and systematically collected" (Bogdan & Taylor, 1975, p. 5).

Interviewing--interviewing is deliberate discussion between two persons. Interviews may be structured or unstructured. The structured interviews are based on a set of preplanned questions, such as usage of an orally administered questionnaire. In some studies less structured interview procedures are used. The intent of an unstructured interview is to "elicit from the person being interviewed a highly personal and detailed account of particular events or sentiments related to the program" (Kester, 1979, p. 24).

Unobstrusive data collection--gathering data unobstrusively is the process of collection of data without any apparant contact between the reseacher and the research subjects. According to Spirer (1980) unobstrusive data could be collected through a search of:

a. physical traces, or observable signs of the use of objects or spaces in a setting;

b. artifacts, or objects that can be identified as resulting from human activity;

c. records;

d. indices, which are comparisons of statistical data; and

e. body language (p. 2).

The main reason for the shift of emphasis to descriptive research in vocational placement has been the inadequacy of experimental research in providing the type of information necessary for the evaluation of such educational programs (Spirer, 1980). Crowe and Adams (1979) also indicate that:

> The emphasis on using classical research paradigms in evaluating these [experiential education] programs can lead to experiments that are elegantly designed but often limited in scope and relevance... The rigidity of the experimental model may, in fact, perform a disservice in educational evaluations (p. 88).

Actually, the inadequacy of experimental research in providing sufficient evaluative information for vocational placement is a result of a paucity of knowledge about the nature of vocational placement. The fact is that we are in such primitive stages of understanding the nature of vocational placement that experimental research is not particularly productive. As noted by Crowe and Adams (1979):

> Classical research paradigms may have limited utility for testing the effects of experiential

> educational programs, especially in the formative developmental stages. While classical research can provide information to individuals, the conditions appear to be such that experiential education is not ready for this in-depth examination (p. 88).

When one has very limited knowledge about a problem, one has to begin the search for understanding in a general way before utilizing specific inquiries. As Freud put it: "the true beginning of scientific activity consists ... in describing phenomena and only then in proceeding to group, classify, and correlate them." (Kaplan, 1964, p. 78). For this reason the researchers have begun to investigate alternative descriptive research methods.

As the review of literature covered in previous section indicated, in case of vocational placement, the most common descriptive research method that thus far has been applied is the case study.

Spirer (1980) summarizes the distinctive characteristics of the case study using the following four elements:

a. The case study is particularistic--this means that through the case study the researcher is be able to focus on a particular setting under natural conditions.

b. The case study is holistic--the use of the case study enables the researcher to study a phenomenon in its

totality, thus providing a detailed description and understanding of a complex phenomenon.

c. The case study is longitudinal--the use of case study provides the researcher the opportunity to study a phenomenon over a period of time.

d. The case study is usually qualitative--while a case study can incorporate both qualitative and quantitative methods, usually the qualitative is emphasized. The qualitative methods of case study would enable the researcher to employ a variety of techniques for collection of data.

The case study method has several advantages over narrower research methods. McCaslin (1978) attributes the strengths of the case study or qualitative method of evaluating vocational placement programs to the following factors:

a. It is a structured, disciplined, systematic, comprehensive and replicable research method;

b. It extends the number of repertoire of techniques available to researcher;

c. It recognizes the multiplicity of causes associated with given outcomes in vocational education and recognizes that causes and outcomes can interact in a variety of ways;

d. Recognizes the range of diversity both within

and between program results in individualization of evaluation designs;

e. Allows the evaluation to consider a broader view of vocational education outcomes;

f. Is a continuous activity undertaken throughout the process of vocational education;

g. Evaluates vocational education programs as they occur;

h. Is not constrained to examining only those outcomes amenable to quantification;

i. Allows the evaluator to collect information on outcomes not known to be important or anticipated during the design of the study;

j. Is an evaluation methodology likely to be understood by most people;

k. Provides personal and immediate feedback;

l. Can be individualized to meet the needs of diverse people;

m. Diminishes reliance on vocational education students to submit needed information; and

n. Produces results which may be more useful to decision makers (p. 4-6).

Thus, McCaslin concludes that a case study should provide a rich source of information that reflects the very essence of a program.

While there are advantages in using a case study method, there are also disadvantages. The major limitations of using the case study method are attributed to the fact that the results of a case study may not be easily generalized from one setting to other settings (Simon & Burstein, 1985; Spirer, 1980). Other limitations of the case study technique have been attributed to difficulty in conducting and reporting a case study, the difficulty in matching the logic of writing a case study with the logic of usefulness to the reader, and the length of time needed to thoroughly conduct a case study (Simon & Burstein, 1985; Spirer, 1980).

Even if there are limitations in conducting a case study, the unique characteristics and advantages of the case study method make it an appropriate tool for the evaluation of vocational placement. The important factor is that using a case study method will enable one to focus on the nature of vocational placement in its totality without limiting the focus in advance to a small number of well-defined variables.

CHAPTER III

Methodology

Introduction

The enactment of the Omnibus Education Act of 1984 has caused placement of students who complete vocational-technical programs to become a top priority of vocational-technical educators in Florida. This study was designed to determine the factors which influence the placement of students who complete postsecondary machine shop programs of Florida's vocational-technical schools. More specifically this study was designed to answer the following research questions:

1. What are the positive factors which influence the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

2. What are the negative factors which inhibit the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

The data for this study were collected through a case study approach which included administration of two questionnaires, personal interviews, and observations.

Population of the Study

An updated list obtained from the Florida Educator's Information Service (FEIS) listed the 23 machine shop

programs which were in operation in area vocational-technical centers and community colleges in Florida during 1982-83 (Appendix I). The population of this study consisted of 19 of the 23 machine shop programs in Florida postsecondary institutions. All students who completed postsecondary machine shop programs in these 19 Florida institutions during the academic year 1982-83, and the instructors and placement officers of these postsecondary machine shop programs were contacted by questionnaire.

The 1982-83 graduates, machine shop instructors, and placement officers of Lewis M. Lively Area Vocational-Technical Center were excluded from the population. Lewis M. Lively Area Vocational-Technical Center was excluded because of a decision to close this machine shop program in 1985. Lee County Area Vocational-Technical Center was excluded from the population since their machine shop program was not established until 1982-83 and as a result did not have any graduates. In addition, Daytona Beach Community College and Florida Junior College in Jacksonville were excluded from the population because of the school administrators' failure to provide the names and addresses of the 1982-83 graduates before the closing date of August 20, 1985.

In phase II of this study, nine programs were selected for in-depth case studies. In the selection of the sites for the case studies special care was taken to make sure

that both urban and rural areas were included in the sample selection. In addition, machine shop programs located in areas with high and low employment opportunities, selected on the basis of information provided by the Division of Economic Development of Florida's Department of Commerce, were included in the sample population for case study. The list of the machine shop programs selected for case study and the characteristics of the districts (rural/urban and low/high employment opportunities) in which the programs are located are presented in Table 1.

Instrumentation

The research questions posed in this study were answered through a combination of questionnaires, interviews, and observations. The decision to use a combination of qualitative and quantitative research methods was made in order to combine the strengths of two research methods. The survey methods and case study methods complement each other and provide more complete answers to the research questions than would either method by itself.

As the review of literature indicated, the major limitation of case studies is the difficulty in generalizing findings. However, through the combination of the case study with the survey instruments the researcher will attempt to overcome some of the limitations on generalizability of results.

Table 1

List of Machine Shop Programs Selected for Case Study

Machine Shop Program	LOCAL CHARACTERISTIC Rural/Urban	High/Low Employment
1. Tom P. Haney Vocational-Technical Center	R	H
2. Sheridan Vocational Center	U	L
3. Atlantic Vocational Center	U	L
4. George Stone Vocational-Technical Center	U	L
5. St. Pete Vocational-Technical Institute	R	L
6. Pinellas Vocational-Technical	U	L
7. St. Augustine Technical Center	R	H
8. Pensacola Community College	R	L
9. West Palm Beach Vocational-Technical Center	U	H

Survey Instruments Two survey instruments were used in this study. The first survey instrument solicited information from the machine shop program completers. The second survey instrument obtained information from the machine shop instructors and placement officers.

The two survey instruments were developed on the basis of the information gathered through the literature review. The review was most beneficial in providing guidelines for development of the questionnaires to be used in this study. Both instruments contained a section devoted to a structured set of questions, and a section for open-ended responses.

The structured section was designed with the intent of obtaining information related to positive and negative factors which effect the placement of machine shop program completers in training-related jobs, and the relative importance of these factors.

The open-ended response section allowed the subjects to make additional comments concerning certain key questions. This study looked at those factors which have had some impact on the placement of vocational graduates: 1) support of the community for vocational programs; 2) presence of cooperative programs; 3) student preparation for training-related jobs; 4) commitment of school personnel for training-related placement; and 5) contact between instructors and employers.

These factors were repeatedly suggested by McKinney and Halasz-Salster (1981), Lewis et al. (1981), Ohio Legislative Commission on Secondary Vocational Education (1978), Buckingham (1973), Eninger (1968), Goor and Schroeder (1976), Lloyd (1981), Moehan and Franchak (1975),

Rosen (1970), Venn (1964), and Wasil (1976) in their studies and appear to be the most probable factors influencing job placement. Each of these general factors identified in the previous research literature served to allow classification of factors identified as positive or negative in their influence in Florida. The bulk of the research studies previously reported did not focus on any one particular vocational area such as machine shop, but rather viewed vocational areas collectively.

The instruments were reviewed by experts in the field of vocational education. The review committee consisted of Florida State University vocational education and research faculty, the State Vocational Education Placement Coordinator, and staff of the Bureau of Program Improvement of the Division of Vocational, Adult, and Community Education. The review committee was asked to evaluate the appropriateness and the content validity of the questions. Based on the recommendations of the review committee revisions were made in the questionnaire items. In addition, on the basis of the review committee's recommendation, the language of the student instrument was simplified to match the students' language competency and avoid unnecessary confusion.

Finally, the instruments were pilot tested twice. The purpose of the pilot studies was to ensure the reliability and viability of the survey instruments. The pilot studies

were conducted in machine shop programs in Bainbridge Junior College in Bainbridge, Georgia, and Lewis M. Lively Area Vocational-Technical Center in Tallahassee, Florida.

A test-retest technique was used to estimate the reliability of the pilot test instruments. As noted by Anastasi (1982) the most simple and obvious method for finding the reliability of an instrument is by administering the same instrument for a second time. Participants for the pilot study consisted of 8 machine shop graduates, 2 machine shop instructors and two placement officers. The time interval between the original administration of the instrument and the retest was one week. The reliability coefficient of the pilot test was determined to be .84.

Case Study For the purpose of achieving the objectives of this study it was decided that the most suitable case study techniques would be personal interviews and observation. In addition to being the most flexible means of obtaining data, personal interviews and observation enabled the interviewer to probe for information and details beyond the questionnaire responses.

It should be noted that in this study the personal interviews were semi-structured. The two survey instruments developed for the study were used as the basis for preparation of questions to be asked in the semi-structured interviews. The semi-structured interview allowed the researcher to determine major themes or issues surrounding

the job placement process. In addition, the semi-structured interview enabled the researcher to focus on key issues related to placement.

The interview procedures was also pilot tested in Lewis M. Lively Area Vocational-Technical Center and Bainbridge Junior College. The pilot test of the interview procedures was limited to interviews with machine shop instructors.

In order to ensure the reliability of the interview procedures the taped interviews were independently coded by the researcher and a trained coder. Then, the two independently derived sets of codes were compared to find the degree of consistency or agreement between the two sets of codes. The two independently derived sets of codes were in complete agreement.

Data Collection

Data collection for this study was done in two phases: a) mailing of the survey instruments, b) interviewing the subjects involved in the case study and observation of records related to placement procedures.

Survey The list of the machine shop program instructors and placement officers was obtained from Florida Educator's Information Services. The list of names and addresses of students who completed machine shop programs in area vocational-technical centers and community colleges during the academic year 1982-83 was acquired from

the Division of Vocational, Adult, and Community Education, individual vocational-technical centers, and community colleges. The two lists were compared in order to secure the most current addresses for the graduates. It should be noted that the list of names and addresses of community college graduates was obtained from the individual community colleges. The Division of Community Colleges does not maintain lists of program completers.

After the collection of names and addresses of the program completers, a package which consisted of a cover letter, appropriate questionnaire, a stamped return envelope and a replica of Florida post-Civil War bank note, as a motivational device, was mailed to each 1982-83 graduate. A similar package was also sent to each of the machine shop instructors and placement officers of the 19 postsecondary machine shop programs.

Cover letters explaining the purpose of the study and expressing gratitude for completing and returning the questionnaire are shown in Appendix II, for program completers, and Appendix III for instructors and placement officers. Copies of the questionnaires are shown in Appendix IV.

The desired response rate for the study was set at 80 percent or higher. On the initial mail-out to 1982-83 machine shop graduates only 52 questionnaires were returned. In addition, a total of 46 questionnaires were returned by the post office due to lack of sufficient

address, lack of forwarding order, or location outside the delivery limit. From the 46 returned packages, fifteen were mailed for the second time using corrected addresses which were obtained by looking through the Directory of Florida Industries and by calling the telephone operators in the appropriate cities. The inability to find new addresses for the remaining 31 graduates caused the total number of 1982-83 graduates of machine shop program targeted for this study to decrease from 149 to 118. From the 44 questionnaires initially mailed to instructors and placement officers 36 were returned.

In order to achieve the response rate set for the study, two weeks after the initial mailing a follow-up mailing of the instruments to the subjects who failed to respond to initial mailing was done. It was expected that the follow-up mailing would increase the response rate by 10-25 percent (Tuckman, 1972). The follow-up packet consisted of a cover letter, a questionnaire, and a stamped return envelope. The follow-up effort stimulated an additional 30 responses from graduates, 5 responses from instructors, and 3 responses from placement officers.

Case Study The sites for case studies were selected on the basis of the following procedures. Vocational programs in Florida are divided into five administrative regions. One machine shop program from each of the five regions was selected for the case study. The selection of

the sites was based on counties that had the greatest number of machine shop program completers in 1982-83 within each of the five administrative region. Special care was taken to assure that both urban and rural areas were represented in the selected sample.

During the second phase of the data collection the 1982-83 graduates, machine shop instructors, and placement officers of the selected sites for case study were contacted by phone to arrange times for interviews. Then the selected sample was interviewed. Graduates whose correct phone numbers were available were contacted and asked to participate in this phase of study. Thirty six of the graduates agreed to participate in the study and the rest (2 graduates) declined.

Instructors and placement officers were interviewed in their own officies, while graduates were interviewed in an office at their place of employment. The offices for interviewing the graduates were reserved through getting in touch with the employer. It should be noted that four interviews with students scheduled at the Honeywell Corporation in Clearwater and General Electric in St. Petersberg had to be cancelled since both companies refused to grant security clearance to the researcher. The rescheduling of the interviews was not possible due to travel expenses involved.

All the interviews were taped and later transcribed by a professional transcriber.

In addition, the placement practices in each site were observed and samples of placement information available to the students were collected.

Data Analysis

After receiving the questionnaires and, completing of the interviews, the data were compiled. The compiled data then were analyzed through the following procedures:

a. The data collected through personal interviews and questionnaires were converted to codes. In development of the coding system special care was taken to make sure that the coding system was one which (1) preserved the integrety of the data, (2) was convenient to implement, and (3) was cost effective.

After conversion of the data, the coded data were analyzed by computing frequencies, percentages and chi square tests.

b. The responses collected through questionnaires and interviews were keyed so that comparisons could be made between: 1) the data collected through personal interviews and the data collected through the questionnaires; and 2) the responses of area vocational instructors, placement officers, and machine shop completers, and the responses of instructors and placement officers from the community colleges. Chi square tests were applied to this data to

determine if significant differences existed between the two groups.

CHAPTER IV

Results of The Study

This study was designed with the objective of seeking answers to the following research questions:

1. What are the positive factors which influence the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

2. What are the negative factors which inhibit the placement of postsecondary machine shop program completers of Florida's vocational-technical schools?

The study was conducted in two phases. The first phase consisted of administering two questionnaires. The second phase consisted of personal interviews and observations with a sample of graduates, instructors, and placement officers from nine of the institutions in the study group. Frequency distribution, percentages, and chi square techniques were used to analyze the data collected in the two phases of the study.

Study Group

The study group consisted of 19 of the 23 machine shop programs in Florida's postsecondary institutions. The 1982-83 graduates, machine shop instructors, and placement officers of these machine shop programs were used as

subjects in this study. Of the 149 machine shop graduates of these institutions during 1982-83, replies from 97 were obtained. Efforts to secure a correct address for 31 of these graduates were fruitless even after several attempts had been made. Twenty-one graduates failed to return the questionnaire by the closing date of August 20, 1985.

Questionnaire results from the 97 machine shop graduates (82 percent), 22 machine shop instructors (100 percent), and 22 placement officers (100 percent) were the basis for the following analysis.

During the second phase of the study, 32 machine shop graduates, 11 machine shop instructors, and 8 placement officers were interviewed.

Table 2

List and Number of Subjects Involved in the Study

Category	Phase I	Phase II
a. Machine Shop Graduates	97	32
b. Machine Shop Instructors	22	11
c. Placement Officers	22	8

Data Analysis

The findings of this study will be examined with regard to the positive and negative factors identified as

influential in the placement process. First, the responses of the graduates regarding positive and negative factors influencing their job placement will be summarized. Second, positive and negative factors indicated by the instructors and placement officers will be described.

Positive Factors--Graduates

The analysis of the data collected from the graduates indicated the following factors as having facilitated their finding employment as a graduate of a postsecondary machine shop program.

1. Adequacy of Training:

The quality of the training provided by the machine shop programs under study was reported by the 1982-83 graduates as one of the most positive factors in their employment. Almost 9 out of 10 (87 percent) of the respondents to questionnaire indicated that they had received good training in their program with 57.8 percent reporting that this was a key factor in helping them get their first job.

As presented in Table 3 both community college graduates (83 percent) and vocational-technical center graduates (91 percent) reported satisfaction with the quality of their training. Application of the chi square to the data did not yield a significant difference between community college and vocational-technical center graduates ($p > .05$).

Table 3

Graduates Perception Concerning the Adequacy of Training They Received

	Yes		No	
Category	f	%	f	%
Vocational-Technical Center Graduates	69	91	7	9
Community College Graduates	15	83	3	17
Total	84	87	10	13

Chi Square= .31679 p >.05

It should be noted that the same finding was supported by the data collected through the interviews of graduates. The analysis of these data revealed that 68.8 percent of the interviewees believed that the quality of training and the relevance of the program curriculum to job requirements had a direct, positive impact in obtaining the first job. The following comments are representative of these interviewees:

"I would have never found this job without this training."

"I would say training was the most important factor--the thorough training I got."

"I feel like the program was important . . . goes in depth in to everything you need to know to get a job. You may not become a tool and die maker, but you know the basics that you have to have. There you're taught the things you need to look for on the job. I feel like the program offers everything that it should."

2. Commitment of School Personnel to Placement of Graduates:

The analysis of data collected through the questionnaire revealed that efforts of school personnel played a positive role in the placement of graduates. Forty-two percent of the respondents reported that the assistance they received from school personnel helped them in finding their first job.

In addition, when asked to rate the quality of the placement services provided to graduates by the school, 42.5 percent of respondents rated the placement services as excellent. Twenty six percent of respondents rated placement services as good, while only 12.3 percent believed that the quality of placement services was very poor.

In pursuing the matter further, the respondents indicated that the school personnel who were most helpful in the placement process were the machine shop instructors. When asked to rank those individuals who provided the most

important assistance to graduates in their search for inital employment, 43.4 percent of respondents (N=36) rated the machine shop instructor as the person who provided the most important assistance. The occupational/ placement specialist was ranked by 26.5 percent (N=22) and the school guidance counselor by 7.2 percent of the respondents (N=6) as most important. The Florida Job Service was ranked by 12 percent (N=10) and friends and relatives by 10.9 percent of respondents (N=9) as those who provided the most important assistance.

The analysis of the data collected through interviews also supported the questionnaire results, indicating that machine shop instructors played the most important part in the placement of students. Among the interview participants 72 percent responded that their success in acquiring their first job was the result of assistance from the instructor. Many of the participants indicated that they did not even search for a job. In these cases the employers called the instructors and the students were recommended by the instructors to go for interviews.

The following are samples of the comments made by several of the graduates concerning the help they received from their instructors in obtaining their first job:

> "The instructor, he knows people around in shops, and people where going to be placed in. He got me a job right off the bat as well. Before the

course was ended I was working. He just told them and they called."

"The most helpful one in the program, I believe, was the instructor. He was a real big help. I know he helped a great deal for three or four of the guys who were in the class with me to get a job."

"I believe it was the instructor. I talked to him quite a few times. I think mainly what it is is people calling him up. Companies like those people that call him up from Miami and he called some of the students that he has heard about a job down there--three of them. He called a few people here and there about jobs . . . . He has placed people in jobs."

3. Involvement with a Cooperative Program:

Involvement of the graduates in a cooperative program was determined to be a factor which positively affected the placement process. Analysis of the data collected through questionnaires revealed that 33.3 percent of the students (N=31) had been in a cooperative program during their machine shop training. Among the respondents who had been involved in a cooperative program, 83.9 percent (N=26) indicated that participation in the coop program had a positive influence in obtaining their first job.

4. Relationship Between Instructor and Employer or Relationship Between Graduate and Employer

The analysis of the data collected through the open-ended part of the questionnaire and the interviews indicated that two positive factors had an impact on the placement of machine shop graduates. A majority of respondents (78.8 percent) reported that the continuing contact between the machine shop instructor and local employers had a direct impact on their employment. According to respondents, if the instructors are known by employers and had a good reputation for the quality of their programs, their students would obtain employment with ease.

The following are samples of the comments made by graduates concerning the impact of the relationship between instructor and employer:

> "The main thing that I can think of is the instructor knew the people that . . . in the shop. If they knew the instructor, they knew it wasn't just someone off the street and said this guy is pretty good in my class, why don't you hire him."

In addition, the participants indicated that the relationship between the graduates and employers had a positive influence on job placement if they were acquainted with the employer personally or knew him through friends or

relatives. The following is an example of comments made by graduates concerning the impact of the relationships between them and their employers.

> "I got it [job] because I knew the employer. I had a friend there and I used to go and see him. Sometimes I talked to the supervisor. He knew I liked to work there. When I finished school he gave me the job."

5. Help from Friends and Relatives:

Help from friends and relatives was also determined to be one of the factors which had a positive impact on acquiring a first job. Fifty-five percent of the respondents to questionnaire felt that friends and relatives were significant in helping them find their first job.

6. Other Positive Factors:

Self motivation, positive attitude, and interviewing skills were reported by some of the respondents (10.6 percent), in the unstructured section of the questionnaire, as factors which helped them find initial employment. The results of the data collected through interviews supported the same finding. Specifically, twenty-two percent of the participants said that positive attitude and self motivation were helpful in getting their first job.

The following are representative of comments made by graduates:

"The person's attitude. If he doesn't know what he wants to do, if it's just a course that he has taken to try and find something to do, he is not really gonna be good at it unless he really likes it. If he really likes it he gonna do good at it because it what he wants to do."

"I believe that attitude, wanting to learn the job and having a crack at it, that is the most important."

"What you know, your skill, how you present yourself, your attitude, your past performance. All important."

Negative Factors--Graduates

The following factors were perceived by graduates as factors which inhibited the placement process:

1. Lack of Adequate Working Experience:

When asked if the graduates had faced any difficulty obtaining a job related to their training, only 19.8 percent reported that they had encountered some type of problem. Of this group of respondents 92.3 percent believed the difficulty was due to the employers' desire for more work experience.

This conclusion was supported by the analysis of the unstructured section of the questionnaire where 80 percent revealed that lack of adequate working experience was a negative factor in the placement process.

In addition, analysis of the interviews showed that 70 percent of the participants believed that most employers preferred more job experience and on-the-job training from the graduates. As a result, the graduates reported that lack of such experiences had a negative impact on the job placement.

The following are samples of graduates' responses when asked what factors made it harder for them to get their first job:

"The only thing I can think of is they should have some type of on-the-job training program to get you better familiar with the machine shop."

"I guess, just inexperience would be the only negative factor . . . to be placed in a job, but it is still the inexperience."

"The only factor I can think of would be maybe you might be starting the students too soon and they don't have enough experience on the machine to work in a job shop".

"A lack of experience is about the only negative factor that would really keep you from getting a job."

2. Lack of Specific Training:

Among the 10.6 percent of the graduates who felt their training was not adequate, 31.6 percent said that more experience with production activities would have been

helpful. In addition, 28.9 percent of the respondents indicated that more experience with particular machines would have provided them with better placement opportunities.

The analysis of the interview data revealed that 38 percent of the participants believed lack of production training and working experience with specific machines limited their employment opportunities.

3. Number of Jobs Available in the Area:

Among the 19.8 percent of the respondents who indicated that they had some difficulty getting their first job, 91.7 percent reported that the low number of jobs available in the area had a negative impact on obtaining a job as a machinist. In addition, 12 percent of the participants interviewed indicated that they had to move from their hometowns and go to cities where larger companies were located to find employment. This group of participants believed that they would have had little opportunity to find a job in their home town because of the limited number of jobs available.

As noted by one of the graduates:

> "Well here it´s not the fault of school. It´s just around here is hard to find a job. I tried to get on at Westinghouse and they´re just not hiring. The same with others [companies]."

4. Lack of Emloyability Skills:

Among the graduates who were interviewed the lack of employability skills such as resume´ writing, job searching skills, and interviewing behaviors were reported by 32 percent as a factor which impaired the placement process. The participants believed that most of their problems originated from the fact that they could not present themselves in an appropriate way to the employers either verbally or through their resume´s. Also, it should be noted that 47 percent of the participants believed that if they had acquired better employability skills and had been more competent in their language skills, they would have obtained better jobs.

The following comments are representative of graduates´ perceptions concerning employability and language skills:

> "An application is supposed to be simple to fill out. If you can´t fill out the application the way they ask you, I don´t think you´re gonna get it."
>
> "I think I need more help on resume writing. The student should be more aware of how to present himself when applying for a job . . . ."

It should be noted that while interviewing and then observing some of the nonnative graduates, the observer noticed that these students had difficulty understanding

the instruction given to them. In most cases it was observed that the supervisor was forced to use a nonnative graduate with a higher level of language competency to translate the instructions. These students indicated that their main problem in obtaining a job was due to their problems with English.

5. Other Negative Factors:

The following factors were mentioned by five of the graduates as factors which worked against them while they were looking for their first job after training:

a. Age - Two respondents indicated that their age, either being too young or too old, had a negative impact on their effort to find their first job.

b. Lack of funds to search for a job - Some of the respondents believed that their difficulty in finding their first job was due to lack of sufficient funds to travel around in search of job opportunities.

Positive Factors--Instructors and Placement Officers

The following factors were suggested by instructors and placement officers as factors which facilitated the placement of 1982-83 machine shop graduates.

1. Commitment of School Personnel to Adequate and Appropriate Training:

The data from questionnaires showed that a majority of instructors and placement officers (81.8 percent) believed that the efforts of school personnel to provide high

quality training had been very helpful in the placement process. Also, when asked to report the factors which had a positive impact on gradautes' success in getting their first job, 77.3 percent of the respondents indicated that the quality of training the graduates received helped them get their first job.

The data gathered through interviews supported these findings. Most of the instructors and placement officers (72 percent) said that their machine shop graduates were well trained and that their training was relevant to the needs of the industry.

2. Commitment of School Personnel to Placement:

The assistance of school personnel in the placement of students was reported by instructors and placement officers as a major factor in assisting students to get their first job. Analysis of the data collected through the questionnaire showed that a majority of instructors and placement officers (77.3 percent) believed that the assistance graduates received from the school during the placement process was helpful in graduates' search for initial employment.

Almost all instructors and placement officers (95.3 percent) reported that 1982-83 graduates received vocational and career guidance as part of their training. Also, all of the respondents indicated that 1982-83 graduates were provided with placement services. A majority of instructors and placement officers (95.5 percent) said the

placement services were easily accessible to all graduates. However, during the observation it was noticed that only in three of the nine sites visited were announcements concerning the placement office and the type of help provided by the placement office were posted in the classrooms and machine shops.

Table 4 presents the type of the placement services the instructors and placement officers reported as having been provided to 1982-83 graduates.

Table 4

Type of Placement Services Reported as Being Available to Students

Placement Services	f	%[a]
a. Information on where to look for a job	41	97.6
b. Information on how to prepare a resume'	38	90.5
c. Information on what to say in an initial job seeking contact	39	92.9
d. information on how to behave in a job interview	41	97.6

[a]n= 42 for each percentage

In addition to placement services reported in Table 4, information on job openings and local companies was ranked by 90.7 percent of the instructors and placement officers as very important in the placement process. Over eighty percent of the instructors and placement officers indicated that information on job openings and local companies were easily accessible to all graduates.

However, it should be noticed that during the observation on the sites the researcher was not able to find any printed materials on the list of local companies or their job openings. In addition, the researcher could not locate any bulletin boards for announcements of job openings either in the classrooms or in the placement offices at any of the sites.

It should be noted that among the school personnel, the assistance received from the machine shop instructor was ranked most often as "most important" in the placement process. Table 5 represents the mean ranking of sources of assistance in placement of graduates ranked "most important" by instructors and placement officers.

3. Relationship Between School Personnel and Employer:

Existence of a good relationship between school personnel and employers was indicated by instructors and placement officers as a facilitating factor in placement process. The majority of instructors and placement officers (93.2 percent reported that contact with local

Table 5

Mean Ranking of Sources of Assistance Reported by Instructors and Placement Officers

Source	Mean Ranking[a]	n
a. Machine shop instructor	1.56	41
b. Occupational Specialist/ Placement Officer	1.97	37
c. Florida Job Service	3.11	37
d. Advisory/Craft Committee	3.39	36
e. Guidance Counselor	3.69	37

Rank 1= most important; Rank 5= least important

was very helpful in assisting students to search for their first job. More than ninety percent of the respondents also believed that local employees look to vocational education to supply trained machine operators. When asked if instructors and placement officers contacted the local employers in regard to their needs for machine shop graduates, 70 percent of respondents reported that they were frequently "in touch" with local employers. The remaining respondents reported that only annual or semi-annual contacts were made.

The data from the interviews revealed that 64 percent of the instructors and placement officers believed that more publicity among local companies and employers was needed for the machine shop programs. The participants felt that additional publicity efforts with local industry would facilitate the placement process. In addition, 22 percent of the participants said that a more frequent line of communication between school personnel and local industry should exist. This group also believed that more involvement of business and industry in planning program curriculum and updating of equipment would improve the quality of placement services.

The following are examples of comments made by instructors and placement officers in regard to involvement with industry:

> "Definitely, we need to work real closely with the industry. If we are able to identify what their needs are as far as machine trades, what type of workers they are looking for, then we can train those workers, and in turn they will hire our students. What we need is for them to help us design some of our programs."
>
> "This area, there's a lot of industry in this area now that has become industrialized . . . we do get support from these industries. We have a good relationship with them. We do work

closely with them. But, I believe not full support as far as getting advice about our program. We have to work harder with them."

4. Existence of Advisory Committee/Craft Committee:

The existence of an advisory or craft committee for the machine shop program was reported by instructors and placement officers as a factor which had a positive impact on placement of graduates. As indicated by the respondents 17 of the 19 machine shop programs had an advisory or craft committee. Among this group of respondents 72.5 percent said that the existance of an advisory or a craft committee for the program had a positive impact on placement of 1982-83 graduates.

As shown in Table 6, application of chi square did not yield a significant difference between the community college and vocational-technical center instructors and placement officers in regard to the perception of the impact of advisory committee/craft committee in the placement process ($p > .05$).

Similar findings were revealed by the data from interviews. Seventy-nine percent of the participants reported that the craft committee was helpful in placing graduates in their first job. The following are some of the comments made by instructors and placement officers about advisory or craft committees:

Table 6

Impact of Advisory Committee/Craft Committee in Placement Process

	Yes		No	
Category	f	%	f	%
Vocational-Technical Instructors and Placement Officers	19	65.5	10	34.5
Community College Instructors and Placement Officers	9	90	1	10
Total	28	77.8	11	22.2

Chi Square .2819 P >.05

"They help as a matter of fact, they do. The advisory committee [members] usually hire the bulk of our students and we also have periodic advisory board meetings where they come and we work together. What type of program they need or what type of work they are going to need and work to that."

"They help advise the instructor and the school to know what kind of equipment to buy. They also

help with placement of student. They hire our students or refer them to others."

"Absolutely. Just this past week of the five or six craft committee members we had students placed in all of their businesses."

5. Participation in Cooperative Program:

Participation in cooperative programs was also viewed by machine shop instructors and placement officers as a positive factor in assisting graduates find jobs. All of the respondents except for the placement officers and instructors from two programs reported that their machine shop program had a cooperative arrangement with industry. Among the respondents who had cooperative programs, 89.2 percent believed that participation in the cooperative program helped graduates to obtain their first job.

No significant difference between community college and vocational-technical center instructors and placement officers in regard to this perception of the positive influence of cooperative programs was found ($p > .05$).

The analysis of data gathered through interviews supported the premise that most of the machine shop programs participated in cooperative programs with local industry. The machine shop instructors and placement officers interviewed believed that the participation of students in the cooperative program enabled them to more easily get a job after completion of their training. As

reported by most of the instructors and placement officers most graduates were hired by the same industries that they worked for during the cooperative program. In addition, the hands-on-experience by the students during the cooperative program helped them in their search for a training-related job.

6. Good Local Economic Conditions:

Analysis of data collected through questionnaires revealed that the instructors and placement officers perceived a strong local job market as a factor in placement of students. Sixty percent of respondents reported that a healthy economy had a positive influence in helping 1982-83 graduates find their first jobs.

7. The Cooperation of Instructor and Placement Officer in Placement Process:

During the interviews with the placement officers and machine shop instructors it was determined that 90 percent of the instructors and placement officers worked closely with each other during the placement process. The participants indicated that the cooperation between them facilitated the placement of graduates.

Negative Factors--Instructors and Placement Officer

It should be noted that the data collected from the machine shop instructors and placement officers failed to identify any factors which respondents reported had a significant negative impact on placement of 1982-83

graduates. The majority of the respondents reported that they did not have any difficulty placing the 1982-83 graduates. However, a few of the respondents reported that a poor local economy and lack of updated and computerized equipment inhibited the placement of graduates.

The analysis of the data gathered through the questionnaire showed that 15.9 percent of the instructors and placement officers believed that a locally depressed economy limited 1982-83 graduates in their search of the first job after training.

In addition, 23 percent of the instructors reported that they encountered some difficulties in the placement process due to lack of updated equipment which matched the needs of industry. Also, a few of the instructors and placement officers believed that there is a need for computerized equipment in the schools for the use of both students and school personnel to match students' competencies to employers' needs.

The analysis of the data collected through the interviews did not substantially alter the questionnaire results from instructors and placement officers. Only two additional negative factors, lack of language competency and lack of good attitude and self motivation, were reported as factors which caused graduates some difficulty in finding initial employment. During the interviews with the placement officers and instructors it was found that

15.8% of the participants expressed their concern about the level of language competency among their students. They said that the graduates' inability to write or speak English at an acceptable level prevented them from getting their first job. It should be noted that the instructors and placement officers who expressed their concern were the ones who had a number of nonnative speakers of English in their programs.

A few of the instructors and placement officers (10.5 percent) reported that graduates encountered difficulties finding their first job because they did not have a good attitude toward employers. They also believed that some students were not motivated and did not look diligently for a job, or gave up looking for a job the first time they were rejected by an employer.

Summary

The results of this study point toward several factors which either positively or negatively influenced the placement of the 1982-83 machine shop graduates of postsecondary institutions in Florida.

Specifically, a total of twelve positive and eleven negative factors were identified by graduates, instructors and placement officers. In Table 7 the positive and negative factors determined by the study are presented. For each factor represented in Table 7, the group of subjects who reported the factor as influential is indicated.

Table 7

Positive and Negative Factors which had an Impact on Placement of 1982-83 Machine Shop Graduates

Factors	Questionnaires		Interviews	
	G	I & P	G	I & P
Positive Factors				
1. Adequacy of Training	X	X	X	X
2. Commitment of School Personnel to Placement of Graduates	X	X	X	X
3. Involvement with a Cooperative Program	X	X	X	X
4. Relationship between School Personnel and Employers	X	X	X	X
5. Relationship between Graduates and Employers			X	
6. Help from Friends and Relatives	X			
7. Self Motivation	X		X	
8. Positive Attitude	X		X	
9. Employability Skills	X		X	

Table 7 (continued)

Positive and Negative Factors which had an Impact on Placement of 1982-83 Machine Shop Graduates

Factors	Questionnaires G	Questionnaires I & P	Interviews G	Interviews I & P
Positive Factors				
10. Existence of an Advisory Committee/ Craft Committee		X		X
11. Good Local Economic Conditions		X		
12. Cooperation Between Instructor & Placement Officer				X
Negative Factors				
1. Lack of Adequate Work Experience	X		X	
2. Lack of Specific Training	X		X	
3. Number of Jobs Available in Area	X		X	
4. Lack of Employ-ability Skills			X	
5. Age	X			

Table 7 (continued)

Positive and Negative Factors which had an Impact on Placement of 1982-83 Machine Shop Graduates

Factors	Questionnaires		Interviews	
	G	I & P	G	I & P
Negative Factors				
6. Lack of Funds to Search for a Job	X			
7. Poor Economy		X		
8. Lack of Language Competency				X
9. Lack of Good Attitude				X
10. Lack of Motivation				X
11. Lack of Updated and Computerized Equipment		X		

G= Graduates

I & P= Instructors and Placement Officers

Adequacy of training, commitment of school personnel to placement of graduates, involvement with a cooperative program, and relationships between school personnel and employers were identified by graduates, instructors, and placement officers as positive factors. Graduates also reported that factors such as help from friends and relatives, relationships between graduates and employers, self motivation, employability skills, and positive attitude had a positive impact in their search for initial employment. Instructors and placement officers believed that existence of an advisory/craft committee, good local economic conditions, and cooperation between instructors and placement officers facilitated the placement of graduates.

Lack of adequate work experience, specific training, employability skills, funds to search for a job, and number of jobs available in the area were identified by graduates as factors which inhibited their search for initial employment. Instructors and placement officers, however, reported that poor economy, lack of updated and computerized equipment, lack of positive attitude, and lack of language competency were factors which had a negative impact on the placement process.

CHAPTER V

Discussion, Conclusions and Recommendations

The enactment of the Omnibus Education Act of 1984 requiring specific placement standards for vocational-technical programs in Florida has left the vocational-technical educators with the task of achieving higher rates of placement for vocational-technical graduates. According to the mandate of the Omnibus Education Act, the analysis of follow-up information and job placement rates of vocational-technical graduates will be used not only to establish program accountability and to judge the effectiveness of vocational-technical education, but also as the basis for funding vocational-technical programs.

Since job placement rates will be used by the State of Florida to determine funding for vocational-technical education programs, vocational-technical directors, administrators, and educators must use their limited resources to achieve higher rates of placement for their program graduates. However, development of any type of plan for increasing the placement rates of vocational graduates should be based on the clear understanding of the nature of placement and identification of factors which

facilitate or inhibit the placement of vocational graduates.

The primary purpose of this study was to determine the factors which positively or negatively influenced the placement of 1982-83 graduates of postsecondary machine shop programs in Florida.

Discussion and Conclusions

Based on the information gathered from the 1982-83 graduates, instructors and placement officers of post-secondary machine shop programs in Florida the following emerged as factors which facilitated or inhibited the placement of the graduates.

1. Positive factors:

a. quality and adequacy of training provided to the students;

b. commitment of school personnel to placement of their graduates;

c. involvement of the graduates in a cooperative program;

d. relationships between school personnel and local employers;

e. relationships between local employers and graduates;

f. help from relatives and friends;

g. self motivation;

h. positive attitude;

i. employability skills

j. existence of an advisory or craft committee for the machine shop program;

k. good local economic conditions;

l. cooperation between instructor and placement officer during the placement process;

2. Negative Factors:

a. graduates' lack of adequate work experience;

b. graduates' lack of training with specific machines;

c. limited number of jobs available in the area;

d. age -- too old or too young;

e. graduates' lack of employability skills;

f. lack of funds to search for a job;

g. poor local economy;

h. gradautes' lack of language competency;

i. lack of good attitude;

j. lack of motivation and;

k. lack of updated and computerized equipment in the machine shop program.

Generally, the results of this study are in agreement with the findings of research studies dealing with factors which have an impact on placement of vocational students. The quality of the training and its relevance to the needs of local industry was found to be a positive factor in the placement process. McKinney and Halasz-Salster (1981), and

McKinney, Franchauk, Halasz, Morrison, and Farnash (1982) also found that the content of curriculum, its quality, and its closeness to the needs of local employers were related to job placement rates.

The results of the study also indicated that commitment of school personnel to placement of graduates and the relationships between school personnel and local employers played a positive role in the placement of the graduates. These findings support the findings of those who reported that there was a significant relationship between the commitment of school personnel to training related placement (Lewis, Fraser, Russell & Orth, 1981) and their involvement and contact with employers and placement rates (Buckingham, 1973; Eninger, 1968; Goor and Schroeder, 1976; Kaufman and Schaefer, 1976; Llyod, 1981; Moehan and Franchak, 1975; Rosen, 1970; Venn, 1964; and Wasil, 1976).

In addition, the results of this study supported the findings that involvement of the graduates in cooperative education, and existence of the advisory committee/craft committee contributed to the placement of the graduates. The same findings have been reported by McKinney and Halasz-Salster (1981), Lewis, Fraser, Russell, and Orth (1981), and the Ohio Legisative Service Commission on Secondary Vocational Education (1978).

Similar to the findings of this study, McKinney and Halasz-Salster (1981) reported that in order to enhance job

placement rates the vocational students must have a positive attitude toward work and good communication skills. The results of this study indicated that machine shop instructors and placement officers believed that lack of good attitude, lack of motivation and inadequate language competencies caused their graduates some difficulty in their search for training related jobs.

As reported by the Ohio Legislative Service Commission on Secondary Vocational Education (1978) the economic conditions of the area had an impact on the placement of graduates. The results of this study also indicate that placement officers, machine shop graduates, and instructors perceived the economic conditions of the area as a factor which may influence the placement process. The data analysis revealed that a poor local economy and inadequate number of jobs available in the area inhibited the prospects of graduates to locate their first job.

It should be noted that in addition to the findings mentioned above, this study revealed several other factors which had an impact on placement of 1982-83 machine shop graduates. These factors are: lack of adequate work experience, lack of specific training, lack of funds to search for a job, and lack of employability skills.

Recommendations for the Profession

1. The establishment of advisory or craft committees for machine shop programs should be encouraged. The

involvement of business/industry representation in curriculum planning was reported to assure relevance of program objectives to actual job requirements and to promote closer working relationships between the instructors and industry representatives. Active advisory/craft committees can also provide a ready source of information on job openings and serve as mechanisms for building instructor credibility with local businesses. In addition, advisory/craft committee members can often provide alternatives (such as on-site visits and co-op work experience) in order for students to gain exposure to a variety of machines and processes not available in many classrooms.

2. Machine shop programs in Florida should provide for more involvement by students in cooperative programs. This activity will not only provide needed hands-on training and actual work experience, but also should foster student awareness of the need for punctality and reliability on a job. Students in co-op programs often acquire experience with machines not available in the classroom and are often provided assistance with job searches.

3. Machine shop instructors should be encouraged to provide more assistance to students in employability skills such as resume´ writing and preparation for interviews so that they can present themselves in the best possible way. Consideration should be given to examining the manner in which employability skills training is offered, as well as

the timing of the component. This study revealed that students recognize the need to present themselves appropriately to employers. Recognizing that competencies in this area may vary considerably, alternatives for providing an individualized employability skills component should be explored. Students also stressed the importance of receiving such training/ preparation early, as opposed to late in a program, thus allowing them to be better prepared to seek a job throughout the training period.

4. Continued emphasis on the importance of a cooperative effort and shared responsibility for placement by the teacher and job placement officer is recommended. This should help to assure that critical information on job openings, local employers, ans so forth, is available to students. This information should be available in the placement office and clearly visible to students. Furthermore, the instructor and placement officer should work as a team to assure provision of appropriate information to meet any special needs of the students.

5. It is recommended that teacher preparation programs emphasize the importance of the role of the instructor in placement. Thorough preparation for this role can help to assure that vocational teachers take responsibility for assessing the employability skills needs of students gathering appropriate information and resources to be used jointly with the placement officer maintaining frequent

contact with employers and acting as a public relations person for his/her vocational program within the community.

Recommendations for Further Research

1. The enactment of the 1984 Omnibus Education Act requires that all job preparatory program with less than a 70 percent placement rate for a period of three consecutive years will become ineligible for the future funding. Since the placement rate is becoming a driving force behind funding for vocational programs in Florida, it is recommended that further studies on placement factors for selected vocational programs that do not meet the above requirement be conducted.

Studies such as those recommended could further validate the positive and negative factors identified by this study, as well as identify additional factors which may or may not be unique to a specific program area.

2. A study to determine the prevalence and nature of the need for English language training for nonnative speakers language in vocational programs in Florida is recommended.

3. Consideration should be given to surveying the equipment updating needs of machine shop programs in Florida, based on current industry needs.

Summary

Identifying factors which have an impact on placement rates of vocational programs is vital to the future of vocational education programs in Florida. Many graduates,

machine shop instructors, and placement officers reported that quality of training and its relevance to the needs of business and industry, involvement of machine shop students in cooperative programs, involvement of business and industry in planning and updating training programs, and the use of updated and computerized equipment for the purposes of training and matching the needs of industry to students' competencies facilitated the placement of machine shop graduates.

Rapid technological change, the demand for up-to-date technical and vocational education programs, and the demand for up-to-date and skilled workers coupled with the limited financial resources available to vocational-technical programs are a few of the ever present problems faced by these programs. The positive impact that involvement of vocational-technical programs with industry has on placement and the role that business and industry can play in assisting vocational-technical programs to improve and update their curricula mandates continued involvement.

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APPENDIX I

List of Area Vocational-Technical Centers and Community/Junior Colleges in Florida Machine Shop Programs

1. Tom. P. Haney Vocational-Technical Center
2. Sheridan Vocational Center
3. Atlantic Vocational Center
4. Southside Skill Center
5. Westside Vocational Skill Center
6. A Philip Randaloph Northside
7. George Stone Vocational-Technical Center
8. Tampa Bay Area Vocational-Technical Center
9. Lee County Area Vocational-Technical Center
10. Lewis M. Lively Area Vocational-Technical Center
11. Manatee Area Vocational-Technical Center
13. Mid-Florida Technical Institute
14. West Technical Educational Center
15. St. Pete Vocational-Technical Institute
16. Pinellas Vocational Technical
17. Marynard E. Traviss Vocational-Technical Center
18. St. Augustine Technical Center
19. Sarasota County Vocational Center
20. Central Florida Community College
21. Daytona Community College
22. Florida Junior College in Jax
23. Pensacola Community College

APPENDIX II

The Florida State University
Tallahassee, Florida 32306
College of Education
Department of Educational Leadership
Adult Education
Higher Education
Educational Administration
Vocational Education

To: Machine shop graduates

We need your help. A study is being conducted by the Florida State University to determine factors which influence the placement of students who completed post-secondary machine programs in Florida during 1982-83.

Please complete the enclosed questionnaire and send it back in the enclosed pre-addressed and stamped envelope. All responses will be kept confidential.

Enclosed you will find a replicate of Florida's bill in recognition of your assistance in this project.

Sincerely,

Shahrokh Massoudi
Project Director

APPENDIX III

The Florida State University
Tallahassee, Florida 32306
College of Education
Department of Educational Leadership
Adult Education
Higher Education
Educational Administration
Vocational Education

To: Machine shop instructors and placement officers

Dear Colleague:

A study is being conducted by the Florida State University to determine factors which influence the placement of students who completed postsecondary machine programs in Florida during 1982-83. Your participation is needed.

Please complete the enclosed questionnaire and send it back in the enclosed pre-addressed and stamped envelope. Your responses will be held in confidence.

Your help is greatly appreciated. I look forward to receiving your response.

Sincerely,

Shahrokh Massoudi
Project Director

Appendix IV

A Survey of Factors which Influence
the Placement of Students

Student Survey

Directions: The purpose of this survey is to determine how you got your job. Please respond by checking the statements or words which best apply to you. In some cases you may need to insert a word or number to answer the question. Your answers will be combined with answers from other program completers and will not identify you in any way.

Name: _____

Address: (If different from the one on the envelope.)

_____

_____

_____

Phone #: _____

Present Occupation: _____

Name of Vocational School/
Community College you attended: _____

_____

1. Are you currently employed?

_____ a. Yes

_____ 1. Full time
_____ 2. Part time

_____ b. No

2. How long after completing your program was it before you took your first job?

_____ a. Less than a month
_____ b. 1-2 months
_____ c. 3-4 months
_____ d. 5-6 months
_____ e. 7-11 months
_____ f. 12 months or more

3. Who helped you find your first job after completing machine shop training? (Place a number 1 beside the most important assistance and number 5 for the least important.)

_____ a. Vocational instructor
_____ b. Occupational/placement specialist
_____ c. School guidance counselor
_____ d. Florida Job Service
_____ e. Friends and Relatives
_____ f. Other _____
_____ g. No one

4. Did you have any difficulty in obtaining your first job?

_____ a. Yes
_____ b. No

If YES, what was the nature of this difficulty? (You may check more than one answer.)

_____ 1. Didn't know who to contact.
_____ 2. Didn't know how to prepare for interview.
_____ 3. Didn't have a resume.
_____ 4. No jobs were available.
_____ 5. Employers wanted more experience.
_____ 6. Wages offered were too low.
_____ 7. I didn't get any help from the school.
_____ 8. Other, please explain: _____

_____

_____

5. Was your first job after leaving vocational school related to your training in machine shop?

_____ a. Yes
_____ b. No

6. Do you feel like you were adequately prepared for a job as a machine shop operator?

_____ a. Yes
_____ b. No

If NO, in what areas do you feel further training could have been provided? (You may check more than one answer.)

_____ 1. More practice on a particular machine.
_____ 2. More experience with production activities.
_____ 3. Opportunity to practice interviewing.
_____ 4. Information on employers in the area.
_____ 7. Vocational skill testing.

7. Which of the following factors <u>helped</u> you in getting your first job after completing the machine shop training?
(You may check more than one answer.)

_____ a. Being male (or, being female)
_____ b. Being too young (or, being too old)
_____ c. My ethnic origin
_____ d. Many jobs were available in my area
_____ e. I received good training in my trade
_____ f. I got help from school (placement services)
_____ g. Other, please explain _____

_____

_____

8. Which of the following factors worked against you in getting a job after completing machine shop training?
(You may check more than one answer.)

_____ a. Being male (or, being female)
_____ b. Being too young (or, being too old)
_____ c. My ethnic origin
_____ d. Few jobs were available in my area
_____ e. Not enough training in my trade
_____ f. No help from school in locating a job
_____ g. Other, please explain. _____

_____

_____

9. Were you in a co-op (cooperative) program for machine shop training?

_____ a. Yes
_____ b. No

If the answer is NO, go to question 11.

10. In your opinion, did the co-op program help you to learn how to work with an employer?

_____ a. Yes
_____ b. No

11. Did the school you attended have a placement office/ placement services?

_____ a. Yes
_____ b. No
_____ c. Don't know

12. If Yes, how would you rate the placement services provided to you?

_____ a. Excellent
_____ b. Good
_____ c. Fair
_____ d. Poor

13. Is there any advice you would offer that might help future vocational students get their first job? (Remember, you will not be identified in any way.)

_____

_____

_____

_____

Thank you for your assistance.

A Survey of Factors which Influence the Placement of Students

Instructors and Placement Personnel Survey

Directions: The purpose of this survey is to determine the factors which influence the placement of students who completed postsecondary machine shop programs in Florida. Please respond by checking or circling the statement/word which best reflects your opinion. If you have any questions, please call me at (904:644-4863). The survey results will not identify your individual responses in any way.

Name: _____

Address: (if different from the one on the envelope)

_____

_____

_____

Phone #: _____

Name of Vocational School/Community College at which you are employed:

_____

Present position: _____

Number of years in present position: _____

1. In your opinion how important are the following factorsin helping machine shop program completers in the process of finding a job?

Very Helpful	Moderately Helpful	Of Little Importance	Factors
_____	_____	_____	a. Information on job openings in the area.
_____	_____	_____	b. Support from school personnel.
_____	_____	_____	c. Contact with local companies.

2. Rate the availability of the following to students in your school. (Circle the number that best applies.)

Rank					Factors
Nonexistent				Easily Accessible	
1	2	3	4	5	a. Information about job openings in our employment area.
1	2	3	4	5	b. Support from the school in helping students get jobs.
1	2	3	4	5	c. Information about local companies.

3. In your opinion rank the following sources of assistance to the 1982-83 machine shop graduates in helping them get their first job? (Rank 1 for the most important assistance and 5 for the least important.)

_____ a. Machine shop instructor
_____ b. Occupational specialist/placement officer
_____ c. Guidance counselor
_____ d. Florida Job Service
_____ e. Advisory Committee/Craft Committee
_____ f. Other

4. How often do you contact the employers in regard to their needs for machine shop graduates?

_____ a. Once a year
_____ b. Twice a year
_____ c. More than twice a year (How often?_____)

5. Do you have an advisory committee or craft committee in your machine shop program?

_____ a. Yes
_____ b. No

6. In your opinion, did the advisory committee or craft committee have an impact on placing 1982-83 machine shop graduates?

_____ a. Yes
_____ b. No

7. Which of the following factors helped the 1982-83 graduates to get a job related to machine shop training?
(Check all that apply.)

_____ a. Employers were hiring males (or females)
_____ b. Employers were looking for young (or mature) workers
_____ c. Employers were giving preference to certain ethnic or racial groups
_____ d. Good economy, many jobs available
_____ e. The completers were well trained
_____ f. The school offers good support to help completers find employment.
_____ g. Other, please explain _____

_____

_____

8. Which of the following factors prevented 1982-83 machine shop program completers from getting a job related to their training? (Check all that apply.)

_____ a. Employers were hiring males (or females)
_____ b. Employers were looking for young (or mature) workers
_____ c. Employers were giving preference to certain ethnic or racial groups
_____ d. Poor economy, few jobs available
_____ e. The completers were not well trained
_____ f. The school offers no support to help completers find employment
_____ g. Other, please explain _____

_____

9. Do you have a co-op (cooperative program) for machine shop training?

_____ a. Yes
_____ b. No

If the answer is NO, go to question 11.

10. In your opinion did the co-op program help 1982-83 program completers get their first jobs?

_____ a. Yes
_____ b. No

11. Do local employers look to Vocational Education to supply trained machine operators?

_____ a. Yes
_____ b. No

If your answer is NO, please explain why you think this is true: _____

12. Do students receive vocational/career guidance during their machine shop program training?

_____ a. Yes
_____ b. No

13. Were job placement services provided to the machine shop students in 1982-83?

_____ a. Yes
_____ b. No

If your answer is YES, were the following job placement services available to the machine shop student in 1982-83?

Yes	No		
___	___	a.	Information on where to look for a job.
___	___	b.	Information on how to prepare a resume.
___	___	c.	Information on what to say in an initial job-seeking contact.
___	___	d.	Information on how to behave in a job interview.

14. Are there any other things you would like to say that might help future vocational students get their first job? (Remember, your individual responses will not be identified in any way.)

_____

_____

_____

VITA

Shahrokh Massoudi was born on March 31, 1950 in Iran. He attended College of Translation in Tehran where he received the Bachelor of Arts degree in German and Business Administration in June 1972. He taught mathematics and chemistry in high school for two years.

He continued his education in University of Vienna in Austria in Agricultural Engineering and did his practical training in Zurich, Switzerland. Upon his return to his country, Dr. Massoudi taught German and Business courses in College of Translation in Tehran for two years. Later, he worked as operation sales manager in an international organization.

Mr. Massoudi decided to pursue his education at which time he entered Indiana University (Bloomington) where he received the Master of Arts degree. His major was Planning and Administration of Vocational Education and minor was Instructional Systems Technology.

He completed a Ed.S. in Instructional Design in Vocational Education from Florida State University. Special emphasis during his doctoral program was given to research, design of instruction, microcomputer, and postsecondary vocational education.

His work experience has entailed design and development of instructional materials from needs assessment to final product. Mr. Massoudi has published articles in Florida's leading vocational journal. In addition to that, he authored and co-authored instructional materials for vocational education.

His major professional interests are in research, training programs, and international education. Mr. Massoudi received his Ph.D. in December 1985.